

Meaningful learning: the end of the social and individual constructivist dichotomy?



Aprendizaje significativo: ¿el fin de la dicotomía social e individual constructivista?

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ABSTRACT

In educational theory, constructivists of diverse philosophical inclinations debate between social and individual constructivism and assume themselves as immovable in the apparent irreconcilable disagreement of their epistemes, generating confusion in the interpretation and implementation of the theory of constructivism. Consequently, this paper seeks to reconcile the social and individual constructivist currents through the exposition of their common theoretical premise. The method that guided the writing of this article was the contrast between authors and theories through educational reflection and hermeneutics applied to written texts. A total of 30 documents were selected from databases such as Scopus, EBSCO, Scielo and Google Scholar, from which 22 articles of different types were taken to strengthen the theoretical discussion. Thus, it was found that constructivist theories encompass the construction of knowledge as processes that, although derived from different conceptions of cognition and learning, agree in postulating that the learner is the protagonist of his or her

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own learning process. It was concluded that meaningful learning represents a link between individual and social constructivist theories, since it is the common vertex of both currents.

Keywords: meaningful learning; individual constructivism; social constructivism; learning material.

ABSTRACT

En la teoría de la educación, constructivistas de diversas inclinaciones filosóficas se debaten entre el constructivismo social e individual y se asumen como inamovibles en la aparente desavenencia irreconciliable de sus epistemes, generando confusión en la interpretación y puesta en práctica de la teoría del constructivismo. Por consiguiente, este documento busca reconciliar las corrientes constructivistas, social e individual, por medio de la exposición de su premisa teórica común. El método que guio la escritura de este artículo fue el contraste entre autores y teorías a través de la reflexión educativa y la hermenéutica aplicada a textos escritos. Se seleccionaron un total de 30 documentos de bases de datos como Scopus, EBSCO, Scielo y Google Académico, de los cuales se tomaron 22 artículos de diferente tipo para fortalecer la discusión teórica. De esta manera, se encontró que las teorías constructivistas engloban la construcción de conocimiento como procesos que, aunque derivados de diferentes concepciones de la cognición y el aprendizaje, concuerdan en postular que quien aprende es el protagonista de su propio proceso de aprendizaje. Se concluyó que el aprendizaje significativo representa un vínculo entre las teorías

constructivistas individuales y sociales pues es el vértice común de ambas corrientes.

Palabras clave: aprendizaje significativo; constructivismo individual; constructivismo social; material de aprendizaje.

Introduction

Throughout the history of human beings, education has played an important role, so much so that it has been modified or adapted due to the "search for success", to the cultural characteristics and the immediate environment where education occurs, and even due to ideologies underlying educational proposals (Peláez & Usma, 2017; Usma & Peláez, 2017; Valencia, 2013). In other words, education and its foundations have been, and will probably be, deconstructed and reconstructed with increasing speed (Álvarez-Correa, Mejía-Castro, & Ruth, 2020). Thus, in recent decades, constructivist pedagogical currents are those that have received the greatest boom and attention in the field of education. This fact, far from ending the existing ideological polarization in the educational field, has led to an even more pronounced dissociation between researchers, teachers and educational managers who converge in declaring themselves constructivists, but diverge with regard to the social or individual perspective of this educational current. This argument is not intended to make any apology for the supposedly eclectic position to which some teachers are "circumscribed", but it does propose a holistic and integral perspective of the constructivist issue.

For this reason, the main objective of this article is to postulate meaningful learning as a common concept that, by its nature, could avoid the usual social/individual constructivist dichotomy. The thesis is defended that meaningful learning is a decision and fits quite well in the constructivist theory, both social and individual, of knowledge. To defend this idea, the principles, potentialities, strategies and limitations of the theory of meaningful learning are presented, the subject of the material implemented to favor the mentioned type of learning is problematized, and the reflection closes by establishing the connection between the social and individual perspectives on the construction of knowledge. The whole reflective process of which this document is composed emerges from a research carried out by the research group 'History, childhood and culture' of the Catholic University Luis Amigó. This research was entitled: Pedagogical strategies implemented to enhance mathematical logical thinking and its contribution to the teaching-learning process in childhood from the

practice experiences in the Bachelor's Degree in Early Childhood Education during the period 2018-2019.

With Vygotsky's contributions, the theories of learning and teaching took a turn. According to Vygotsky (1995), the process through which human beings internalize and construct habits and knowledge goes from the interpsychological (social) to the intrapsychological (individual), that is, "every higher mental ability appears twice in the life of the individual" (Lantolf, 2000, p. 17). Likewise, it is understood that theories on teaching and learning do not disregard previous contributions such as these, although they do adopt or decline some of their postulates. This is the case of the theory of meaningful learning, which, according to Ausubel (1983), is the interaction of new information with the individual's previous knowledge (previous cognitive structure), this interaction being driven by the motivation of the learner.

This perspective of the learning process could be understood as dialogical in that the individual establishes an inter- and intrapsychological interaction. In other words, "cognitive development is the conversion of social relations into mental functions." (Moreira, 1997, based on Vygotsky, p. 7). Additionally, from Ausubel's proposal, the teacher can be seen as a mediator so that the learning of his students is meaningful. Regarding this, Juárez (2015) points out that the teacher must offer situations based on the knowledge of the students' abilities. However, what has been mentioned up to this point would be the beginning of the spiral, i.e., the knowledge built in this psychological interaction is the foundation for the construction of new ideas, which in turn will be the basis for many others (Juárez, 2015).

In a world where ideas about reality flow like a vertiginous and rapid affluent, it is understandable that there is a hodgepodge of theorizations whose foundations are diverse (Álvarez-Correa, 2019; Bauman, 2004; Berman, 1998). In the same way, there has been uproar in education every time a new pedagogical current or some theory about the mental representation of the knowledge that surrounds the person emerges. Among these philosophical currents applied to pedagogy is constructivism. In this regard, it is understood that the construction of knowledge occurs when the learner relates the information obtained from multiple sources with his or her previous knowledge to give birth to a new and particular idea, concept or structure, that is, the construction of knowledge goes beyond memorizing the teacher's discourse, it has to do with its innovation, it is a different version even if it is based on a certain source (Barriga and Hernández, 2002).

Likewise, it is possible to state that "The fundamental premise of constructivism is precisely the active construction by students of their own knowledge, through

incorporating and relating new information to previous knowledge." (Elboj, Puigdemívol, Soler, & Valls, 2018, p. 48). Based on these conceptualizations of what constructivism is, it is possible to somberly glimpse the social - individual constructivist dilemma. On the one hand, the active participation of the student to incorporate and relate information, which will become knowledge, is mentioned. On the other hand, it can be noted that these "diverse sources", from which the information comes, refer to the surrounding context, that is, the devices, tools and people that surround the learner. However, both the social (constructionist) and the individual (constructivist) perspectives, in spite of the simple allegory being presented, share the idea that the learner is not a passive subject but someone who has everything to do with his own learning process, that is, with his own elaboration of knowledge.

Materials and methods

This reflective article had two ways of methodological action as a source of nourishment for the threaded discussion. On the one hand, a symbolic discussion was established between the postulates of the most representative authors of the theories of meaningful learning and constructivism seen from the individual and social approach. In this way, hermeneutics, from a qualitative perspective, applied to the interpretation of texts, was implemented as a research method. In other words, the hermeneutic method was used for the "construction of knowledge from the material culture" (Galeano, 2012). Hermeneutics, from the perspective of these authors, is understood as a process of interpretation and construction of meaning through the contrast between prejudices, axioms and imaginaries, the social phenomena experienced or reported and the text per se with all its symbolic and contextual load (Ángel, 2011; Chernobilsky, 2006; Herrera, 2010).

On the other hand, a literature search was necessary to make way for the dialectic established around the topic in question. Thirty documents were taken from different national and international databases, namely: Scopus, EBSCO, Scielo and Google Scholar. Of these selected documents, 22 were taken into account, including articles of diverse typology and books, to thread the proposed lucubrations and postulates. Significant contributions, found and highlighted in the texts consulted, were taken and passed to an information analysis matrix prepared by the researchers. Once in the matrix, each theoretical postulate was contrasted in the light of the contrary propositions, in this way, a dialectic was channeled that shed light on what is proposed in this article as the end of the dichotomy.

Results

This section of the document will only address the most relevant aspects of the theory of meaningful learning in light of the proposed topic of discussion and reflection; this is because there is already a considerable variety of documents, such as those referenced in the bibliography, which address the topic of meaningful learning in depth, so it is not considered necessary to delve into issues that other authors addressed in their reflections. Thus, in order to understand meaningful learning it is necessary to take into account what Ausubel calls cognitive structure, according to him:

[...] the student's learning depends on the previous cognitive structure that is related to the new information, "cognitive structure" should be understood as the set of concepts, ideas that an individual possesses in a given field of knowledge, as well as its organization. (Ausubel, 1983, p. 1).

In this way, the pre-existing cognitive structure is constantly modified with the new constructions, in the same way, these new constructions derive in new bases of the mentioned structure, also called subsumers, which will become part of a "new" structure that in turn will serve as a foundation for the learner to approach new knowledge. This cyclical process of construction is what Ausubel refers to as Meaningful Learning. In fact, Ausubel himself states that:

Meaningful learning occurs when new information "connects" with a relevant concept ("subsunsor") pre-existing in the cognitive structure, this implies that, new ideas, concepts and propositions can be meaningfully learned to the extent that other relevant ideas, concepts or propositions are adequately clear and available in the individual's cognitive structure and that they function as an "anchor" point to the first ones (Ausubel, 1983, p. 2).

In this sense, the cognitive structure of which Ausubel speaks can be understood as a hierarchy of subsumers (Moreira, 1997). However, it is not reduced to this. Ausubel also speaks of what he calls subordinate learning and superordinate learning. The former refers to the process in which new information becomes part of a more general idea or construct, while the latter has to do with the construction of a new subsumer whose purpose is to subordinate that which made its construction possible, i.e., the concepts or propositions from which it is understood.

In the words of Díaz-Barriga and Hernández (2002):

This means that we process information that is less inclusive (subordinate facts and propositions) in such a way that it becomes subsumed or integrated by more inclusive ideas (called supraordinate concepts and propositions). Thus, sometimes we learn content that has to be integrated into more general and abstract schemas; at other times, we learn precisely integrated concepts that agglutinate or subsume issues we already know. (p. 39)

However, Ausubel not only focuses his contributions on the description of the cognitive process, but also proposes some theoretical strategies to facilitate meaningful learning. Moreira (1997) recognizes at least two strategies in Ausubel's theory: on the one hand, he speaks of substantive facilitation as a prior and essential conceptual analysis of what is to be taught; on the other hand, he mentions programmatic facilitation, which is simultaneously subdivided into four principles:

Progressive Differentiation. First, an inclusive and general whole is presented, and then, gradually, differences are established in terms of the content being worked on.

Integrative Reconciliation. This principle has to do with the possible correspondence between ideas, that is, the contrast and establishment of relationships between them. Likewise, it seeks to find pronounced differences between these ideas and, as its name indicates, to arrive at the reconciliation of these disagreements.

Sequential Organization. Based on the previous step, it proposes to sequence the topics and divide them into smaller and more digestible fragments or units, taking into account the possible relationship between a topic and the topic that follows or precedes it.

Consolidation. It implies that what follows, in terms of teaching content, is based on the new subsumers that the student has according to the previous teaching (or previous thematic unit).

Meaningful learning has a progressive character, it develops through time and experience, which leads to a change in the cognitive structure and makes it possible to endow the emerging content of these constructions with significance. Now, when the Ausubelian theory is analyzed in depth, it is possible to realize that when one learns significantly, one does not necessarily learn something "correct" or "true"; it is enough that what is learned is related to the previous or existing cognitive structure for the learning to be significant. That is, "whenever there is a non-arbitrary and substantive connection between new information and relevant subsumers meaningful learning occurs, but this [sic] can be wrong from the point of view of a user community." (Silva, 2011, p. 86). Understand that, on the one hand, the substantivity of knowledge is the

relationship that is made between what is already known and the understanding of the new knowledge that is being learned, i.e., it is not a process in which the information that the teacher tries to teach is copied and pasted, it is rather an elaboration, a new and authentic understanding that the student makes. On the other hand, the relationship must not be arbitrary, that is, the new knowledge is not randomly related to any previously existing idea in the cognitive structure, but to subsumers specifically relevant to what is being learned.

However, we could say that, since the subject learns by relating new information to pre-existing cognitive structures (subsumers), then the "same" knowledge, fact, information, object or "reality" can be assigned different meanings. Therefore, assuming that in order to learn we relate what we learn with previous knowledge, relevant to what is learned, then absolute truth, objective reality and any attempt of intellectual totalitarianism deserves the contempt of this theory. Likewise, and considering this reflection, one can question what is "correct learning", one can even go further and ask if there really is such a thing as correct knowledge that someone aspires to learn. In fact, "When we face a given phenomenon, the content of the mental representations we build depends on the questions we want to answer, it depends on the needs, interests and emotions of the individual." (H. Rodriguez, 2008, p. 74).

In this way:

Predisposition to learn and meaningful learning have a practically circular relationship: meaningful learning requires a predisposition to learn and, at the same time, generates this type of affective experience. Positive attitudes and feelings in relation to the educational experience are rooted in meaningful learning and, in turn, facilitate it (Moreira, 1997, p. 14).

Likewise, the material is potentially meaningful when it is "relatable to the cognitive structure in a non-arbitrary and non-literal way" (Moreira, 1997, p. 13). This implies a responsibility on the part of the teacher in terms of selecting or designing the material in an intentional and deliberate manner, in addition to promoting a playful attitude (Quintero, Ramírez & Jaramillo, 2016) with his or her actions, and, on the other hand, it makes the learner responsible because there must be a disposition on his or her part for meaningful learning to take place. Meaningful learning is a decision. In this sense, it is necessary to have a disposition towards this type of learning on the part of the learner and, in addition, the teacher must have the learner's previous knowledge in mind so that he/she can include it in the syllabus when planning the classes. From the latter derives, for example, the selection, sequencing and presentation not only of the content but also of the learning material.

On the other hand, what happens when someone wants to learn something and does not have the subsumers, or prior knowledge, necessary for this learning to occur? Piaget would have said that, in this case, the subject has two options: the first consists of giving up, while the second has to do with modifying himself (Moreira, 1997). If he chooses the first option, the learner would be giving up learning whatever he was interested in learning. On the other hand, if he chooses the second option, he would be agreeing to restructure the existing assimilation schemes, that is, he would modify the assimilation schemes he has at the moment, with the objective of having a cognitive structure that allows him to relate to the knowledge that, at the moment, is unknown or foreign to him. This second option is not limited to the new construction of meanings, ideas and concepts. It happens that, additionally, this construction allows establishing new relationships with the previous structure, which in turn is renewed as these new constructions are elaborated (Barriga and Hernández, 2002). Because of this, we speak of the possibility of restructuring or adapting the aforementioned previous structure in favor of the learning that is to be achieved.

One of the possible favorable answers to this question is precisely the decision to participate in a process of expansion, adjustment or restructuring of the mental schemas (Piaget, cited in Moreira, 1997) or of the mental representations (Johnson-Laird, cited in Moreira, 1997) with which the cognizing subject approaches that remote, although cognizable, reality or knowledge. However, it is evident that if there are not yet appropriate subsumers with which the new information can be related, meaningful learning could not take place in the learning process. This is not a pessimistic perspective on the unknown, but rather a confirmation that the disposition of the learner is crucial for meaningful learning and, at the same time, it is a fact that reminds us of our limitation when it comes to knowing.

In fact:

For Piaget, people build their intelligence and their knowledge of reality on the basis of innate capacities, through the processes of assimilation and accommodation. Children construct reality through the assimilation of the world around them and develop cognitively by adapting pre-existing schemas to new situations. (Elboj, et al., 2018, p. 48).

Consequently, learning, linked to motivation and willingness to learn, is presented as a possibility that can be developed for any audience. As mentioned, it is a progressive matter, it takes time and effort, and the demands and difficulties encountered along the way will vary from one individual and/or group to another. With this, it can be affirmed that intelligence and knowledge are developable and that each process is

particular in itself. On the other hand, it should also be taken into account that not only is each process unique, but also the educational needs of each student, and even more so, of each person. Up to this point, we have discussed what meaningful learning is, the role that students and teachers play for it to take place, and the possible strategies that one or the other could use to make this type of learning happen. Now, what role does the learning material play in this process? The answer to this question requires reflection not only on the material itself, but also on the intention of those who select the material (teachers, usually), and on those who are involved in the act of teaching (students, usually). Keep in mind that this reflection is not intended to assert that the teacher teaches and the student learns, it is understood that both acts are interrelated and interwoven in the process itself (Freire, 1997), if it is posed in this way is only in order to facilitate the digestion of this approach.

Ausubel speaks in his theory of two types of meaning: potential meaning (logical) and real meaning (psychological). Although both are related, the essential difference between them is that while the former has to do with the material (always in relation to the learner), the latter refers directly to internalization in a meaningful way, that is, it is given by relating the new information to previous knowledge on the part of the learner. This psychological meaning must be understood as the new construction that the learner elaborates, a construction that is singular, in fact, unique. Thus, it should be understood that the material and the way it is presented and sequenced may or may not become logical meaning, and that once this logical meaning has become a new construction, a construction with its own identity, we are talking about the desired psychological meaning; that is, we are talking about meaningful learning. Avoid confusing the genuine idiosyncrasy of the new construction with an unknown origin of knowledge; in fact, what is referred to with this identity characteristic is, as Elboj et al. (2018) put it, the construction of one's own understanding. In the words of L. Rodríguez (2008):

Meaningful learning is a complex process that requires a predisposition to learn and potentially meaningful material. Therefore, the process should not be confused with the material with which it is carried out. Significance is not in the material itself, but is attributed by the subject through the interaction he establishes with the subsumers or anchor ideas present in his mind, as long as he wants to do so, that is, as long as he has a favorable or significant attitude. (p. 29).

As already tacitly stated, meaningful learning requires that the relationship between new information and previous knowledge, instead of being literal (mechanical or repetitive learning), be substantial (Ausubel, 1983; Díaz-Barriga, 2003; Díaz-Barriga

and Hernández, 2002; H. Rodríguez, 2008; Juárez, 2015; L. Rodríguez, 2008; Moreira, 1997; Silva, 2011). Likewise, meaningful learning is progressive in nature, not instantaneous or fleeting. Ergo, despite the obstacles that the student may encounter to learn a certain subject, learning is a process and intelligence can be developed, so making the decision to develop the necessary subsumers to approach this distant knowledge is the first step to achieve it.

When thinking about the material, its sequence and logic, attention is diverted to the teacher. The problem is when the information is presented as unconnected, when the relationship between topics and learning units is not used to establish a logical sequence, in which the level of complexity rises gradually, it is difficult to guide the student towards meaningful learning. In circumstances such as these, it is common for students to opt for repetitive learning of isolated pieces of information with the intention of passing the exam or obtaining at least an acceptable grade in the subject (Barriga and Hernández, 2002). When mentioning the situation in which information is presented by means of loose ends, unconnected and fragmented, we are criticizing the disintegration that, in some cases, more than desired, occurs in the way in which the information or knowledge to be taught is structured and presented.

Thus, the knowledge and procedures that the student learns, and many times develops or builds, to face life situations outside school, may be partially or completely contrary to those taught in the classroom (Carraher, Carraher and Schliemann, 1985). It is for this reason that we insist on the importance of taking into account the context and its potentialities to make it part of the daily construction of academic knowledge that is done with the students; whenever it is the case. The procedures, which we can label as artisanal, those that emerge in everyday life, can be favored by those developed in the academy and vice versa. In this sense:

There is also evidence that informal procedures learned outside of school are often extremely effective. [...] It seems quite possible, therefore, that children may have difficulty with routines learned in school and, at the same time, be able to solve the mathematical problems for which these routines were designed in other, more effective ways. (Carraher et al., 1985, p. 21)

Context is fundamental in this process. It must be taken into account not only for learning, but also, and even more so, for teaching. The interaction between the learner and the surrounding environment allows the learner and the teacher to know what is culturally rooted in what they learn or teach, what is shared in their specific context, what knowledge is related to the socially constructed meaning. For this reason, it is argued that both supraordinate and subordinate meaningful learning require the

aforementioned social interaction. This approach is aimed at reducing the gap between the knowledge produced in the academy and the knowledge derived from the daily practice that occurs in everyday life. Consequently, this responsibility is delegated to the teacher, conceived as "an active subject, who in addition to participating in the formulation of curricular proposals in the school context produces his own knowledge that forge and enrich the activity of the teacher" (Ortega, 2017, p. 88).

However, it should be noted that the theory of meaningful learning does not seek to detract at any time from the importance of memory. This basic learning device is of great importance for cognitive development. While memory is not conceived as the opposite of this mode of learning, purely rote, mechanical and repetitive learning can be considered the antithesis of the theory of meaningful learning. This is why there are divided opinions when it is proposed that everything depends on the decision of the learner or when it is proposed that there is a shared responsibility on the part of both the teacher and the learner. For example, Moreira (1997) states categorically that this responsibility cannot be shared by the teacher. On the contrary, there are authors who state that with a suitable selection and sequencing of the learning material, the teacher can share this responsibility to the point of being comparable to the student's responsibility (Barriga and Hernández, 2002).

In other words, it is up to the teacher, as long as his or her interest is to achieve meaningful learning for his or her students, to direct the educational issue towards a playful attitude of the students towards learning. It can be said then that, to a certain extent, the teacher is responsible, although not completely, for whether meaningful learning occurs or not. This responsibility of the teacher translates into the selection of material. The material matters as much as the willingness to learn in a meaningful way. With this positive attitude towards learning it is much more likely that the student will make the decision to learn meaningfully, that is, the student must be determined to establish a reciprocal relationship between learning, the object to be learned, and himself, the subject who learns. However, this willingness will not be of much use if the learning material is not potentially meaningful, and vice versa, potentially meaningful material is of little use if there is no interest or willingness to learn meaningfully.

Conclusions

As already mentioned, the central theme of this article is the role of meaningful learning in the never-ending constructivist debate. Before mentioning anything else,

it is important to emphasize that both perspectives converge in that they do not conceive the student as a passive entity and receiver of information, but rather as a protagonist of his learning process; that is, as someone who elaborates his own construction of knowledge based on the information of the surrounding context. Although there are convergences between both perspectives, it is clear that there are quite marked divergences or disagreements between the theorizations that have been made in this regard. In fact, when Araya, Alfaro and Andonegui (2007) refer to the different forms of constructivism, they cannot avoid expressing that "within it, trends have emerged that privilege certain options, either individual construction or social construction" (p. 85). Even Niemeyer and Mahoney (cited in Araya et al., 2007), exhibit the social-individual constructivist dichotomy between the forms of constructivist psychology they mention; to be specific, while Final Constructivism refers to an individualistic perspective, of self-regulation and subjectivity, the Formal Constructivism they speak of can be understood as a social constructivist perspective, i.e., intersubjective.

Thus:

Let us recall that at the educational level, constructivism is concerned at the individual and intrapsychic level with the way knowledge is constructed. It proposes an ideal subject, whose mental functioning is explained thanks to internal mechanisms that all subjects carry and that develop with considerable independence from the social context. Constructionism, taking up the contributions of constructivism and genetic social psychology, is interpsychic, collective and deals with the action of the subject in the social field. (H. Rodríguez, 2008, p. 73).

Frida Barriga and Gerardo Hernández also problematize this issue as follows:

Is the mind in the head or in society, is development a process of cognitive self-organization or rather of cultural learning within a community of practice, what role does language-mediated interaction or communicative interaction play in comparison with the self-structured activity of the individual (Barriga and Hernandez, 2002, p. 26), what is the role of language-mediated interaction or communicative interaction in comparison with the self-structured activity of the individual (Barriga and Hernandez, 2002, p. 26).

Here it can be seen that the unknown does not change in any of the questions. When the mind is thought of as resting in the head, the perspective is individualistic, when it is conceived of in society, the perspective is social. Similarly, self-organization is part of the individual perspective while cultural learning within a community fits better in

a social perspective. Finally, a contrast is made between language-mediated interaction and the self-structured or self-regulated activity of the individual. This issue still revolves around the question of how cognizing subjects, called humans, approach knowledge, how does the process of mental representation of what is happening around us take place? About these mental representations it can be said that they are lucubrations that seek to approach the knowledge of the world of individuals, although, of course, it is a subjective construction that starts from intersubjectivity. Therefore, there may be divergences between one and the other. Likewise, and despite the desire of many teachers, what students learn is related to their interests and needs and not necessarily to what the teacher teaches (H. Rodríguez, 2008). For this reason, the sentence with which this document opens is of utmost importance, at least as far as meaningful learning is concerned. Therefore, in the human construction of knowledge of the world and its phenomena, not only does the "thing" itself play an important role, but also the ideas one has of the world, which give way to the construction of the aforementioned mental representations (H. Rodríguez, 2008).

If we transfer this conception of the act of knowing to the field of education, we find that "learning a content means that the student attributes a meaning to it, constructs a mental representation by means of images or verbal propositions, or elaborates a kind of theory or mental model as an explanatory framework of such knowledge" (Barriga and Hernández, 2002, p. 32). (Barriga and Hernández, 2002, p. 32). This reflection allows us to appreciate how the authors use two theoreticians to talk about what only one of them proposed. It is assumed that they are referring to meaningful learning, but while the first part of the quotation corresponds to something that Ausubel would have said, what follows is something that Johnson-Laird would probably have said. It is not that the authors have confused the theoretical propositions of Ausubel and Johnson-Laird, it is simply that both authors are constructivists and their theories contribute to the same issue; not to mention that their contributions differ in terms of the perspectives from which they were thought. This is due to the fact that, although the contributions of different authors have been brought up, constructivism has never ceased to be mentioned at any time.

Therefore, when we talk about meaningful learning, we are still talking about constructivism; it is one of the parts of the constructivist set. There are even those who establish a relationship of dependence between meaningful learning and interaction with others. For example, Moreira (1997) states that, without social interaction, it would be difficult to speak of meaningful learning. According to this author, both subordinate meaningful learning and superordinate learning require the exchange of

meanings; the negotiation of which Vygotsky speaks. However, this is seen to be the case when the concept of meaningful learning is extrapolated to Vygotsky's theory. On the other hand, if the relevance of context is thought of from a teaching perspective it can be concluded that "for the development of meaningful learning one must know the environment through the culture and customs that the child has in order to link them to the teaching-learning process." (Juarez, 2015, p. 41). In the same way, H. Rodríguez (2008), is categorical in asserting that social interaction is very important for cognitive construction to take place.

On the other hand, the issue of the debate within constructivist theories has already been addressed by other authors. For example, Henry Wallon thinks that "Socialization and individualization are interconnected and condition each other" (Wallon, quoted in H. Rodríguez, 2008, p. 78). Although this author had already warned that the social-individual constructivist ideological polemic could find its end in reciprocity, the link between these perspectives of the constructivist issue had not been properly discussed: meaningful learning. Thus, the constructivist debate can be ended if we consider that the subject, the individual, is a social being who needs interaction to give way to his cognitive constructions at the individual level; that is, we start from a subjective level to give way to the construction of subjectivity. It is also important to emphasize that the means of expression and interpretation of these cognitive constructions is language, which in turn varies from one context to another. Thus, L. Rodríguez (2008), in his book *La teoría del aprendizaje significativo en la perspectiva de la psicología cognitiva* (The theory of meaningful learning in the perspective of cognitive psychology), argues that:

The human mind operates with concepts and handles them in linguistic terms in its thinking operations, from which it follows that the mediation of language determines the meaningfulness of learning [...] The correlation between language and meaningful learning is thus crucial. [The correlation between language and meaningful learning is therefore crucial. (p. 17) To summarize a little, language, as a means of communication, is essential for all kinds of learning, including meaningful learning. Hence, without neglecting the importance of the material selected and the disposition of the student, it is considered a determining factor in the meaningfulness of learning.

It is well known that within constructivist theories there is an intellectual division as to the position that is exercised within this theory. The dichotomy to which reference is being made is that which divides the world between a social perspective and an individual perspective without taking into account that these perspectives do not necessarily exclude each other. Therefore, their relationship, rather than being

problematic, should be complementary; even more so when we are talking about education. To summarize the matter a little, the teacher must strive to understand the previous knowledge of his students (subsumers), knowledge acquired or developed thanks to daily life, base his instruction on these subsumers, and accompany the student in the process in which he "gives birth" (construction of a new idea). That is what teaching is, it is the art of making light (H. Rodríguez, 2008). The point is that this process of "giving birth" is carried out by the student in relation to the teacher's knowledge, but the knowledge that results from this relationship is different both from what the student knew before and from the teacher's knowledge itself, i.e., it is a construction of the student's own knowledge, although it requires interaction.

It can be seen that there is an explicit and manifest relationship between the individual and social constructivist perspectives; this link is precisely meaningful learning. In other words, knowledge, from a holistic and integral vision of constructivist theories, is constructed by the individual. For this reason, and taking into account the discussion and reflections presented in this paper, it is proposed to conceive meaningful learning as the unifying entity between social and individual constructivism. The end of the individual - social constructivist dichotomy. In spite of the profound discussion that has been established among the theories and authors presented, there are still some lines of reflection that may well merit further studies or, at least, other texts based on research. For example, to what extent can the logical meaning of the material contribute to meaningful learning, what are the possibilities in the case where the material is presented as logically meaningful but the student, consciously or not, learns repetitively, and even, returning to one of the previously raised questions, what about the case where the student decides to learn meaningfully but his intellectual or cognitive maturity obstructs the process? Each of these questions represents a possible situation whose answer could vary from one context to another, ergo, we are in favor of the systematization and continuous and rigorous reflection of the teaching practice, there are the real answers to these questions.

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